

My account home

Newsletters and alerts

Manage my newsletters

Manage my e-mail alerts

Manage my RSS feeds

Manage special-offer alerts

More »

Print subscriptions

Subscribe to *The Economist*

Renew my subscription

Change my print subscription delivery, billing or e-mail address

Pay my bill

Activate premium online access

Report a missing copy

Manage my subscription

More »

Digital subscriptions

Subscribe to Economist.com

Manage my subscription

Mobile edition

Audio edition

Download screensaver

More »

Classifieds and jobs

The Economist Group

About the Economist Group

Economist Intelligence Unit

Economist Conferences

Intelligent Life

CFO

Roll Call

European Voice

EuroFinance

Reprints and permissions

EIU online store

Economist shop

Advertisement

The Economist

Bestsellers from The Economist Shop

Order now

Technology Quarterly

Monitor

Hard act to follow

Sep 3rd 2009

From *The Economist* print edition

Environment: Making softwoods more durable could reduce the demand for unsustainably logged tropical hardwoods



Kebony's product is furfuryl

Kebony stops wood from rotting by placing it in a vat containing a substance called furfuryl alcohol, which is made from the waste left over when sugarcane is processed. The vat is then pressurised, forcing the liquid into the wood. Next the wood is dried and heated to 110°C. The heat transforms the liquid into a resin, which makes the cell walls of the wood thicker and stronger.

The approach is similar to that of a firm based in the Netherlands called Titan Wood. Timber swells when it is damp and shrinks when it is dry because it contains groups of atoms called hydroxyl groups, which absorb and release water. Titan Wood has developed a technique for converting hydroxyl groups into acetyl groups (a different combination of atoms) by first drying the wood in a kiln and then treating it with a chemical called acetic anhydride. The result is a wood that retains its shape in the presence of water, and is no longer recognised as wood by grubs that would otherwise attack it. It is thus extremely durable.

The products made by both companies are completely recyclable, environmentally friendly and create woods that are actually harder than most tropical hardwoods. The strengthened softwoods can be used in everything from window frames to spas to garden furniture. Treated maple is also being adopted for decking on yachts. The cost is similar to that of teak, but the maple is more durable and easier to keep clean.

Obviously treating wood makes it more expensive. But because it does not need to receive further treatments—a shed made from treated wood would not need regular applications of creosote, for example—it should prove economical over its lifetime. Kebony reckons that its pine cladding, for example, would cost a third less than conventionally treated pine cladding over the course of 40 years. Saving money, then, need not be at the expense of helping save the planet.

Back to top ^^

Readers' comments

- Comment (3)
- Recommend (9)
- E-mail
- Share
- Print
- Buy PDF
- Reprints & permissions

Related Items

- In this quarterly
- Policing the internet
 - Floating wind-turbines
 - Self-monitoring smart bridges
 - Cyber tyres
 - Plastic to mop up radiation
 - A battery fuelled by air
 - Classifying cancers
 - Digital mapmakers
 - Washing machines without water
 - How to make softwood hard
 - Long-term data storage
 - Spotting humans online
 - What your next satnav will do
 - Mobile augmented reality
 - Unmanned military aircraft
 - The rise of 3-D printers
 - Tinkering with DNA
 - Improvements in 3-D displays
 - Andrew Grove of Intel
 - Offer to readers

From *The Economist*

Land reform in the Brazilian Amazon

Jun 11th 2009

More articles about...

The environment

Websites

Kebony, Titan Wood

Advertisement

The Economist

Bestsellers from The Economist Shop

Order now

Successful Strategy Execution

The City

Guide to Hedge Funds